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Application No.: 10/826,003

Docket No.: JCLA12118

In The Claims:

Please amend the claims according to the following listing of claims and substitute it for all prior versions and listings of claims in the application.

Claim 1. (withdrawn) A light-emitting diode package structure, comprising:

- an insulating sub-mount having a first surface with a cavity therein;
- a first patterned conductive-reflective film set up on a portion of the first surface, a first sidewall of the cavity and a bottom surface of the cavity;
- a second patterned conductive-reflective film set up on a portion of the first surface, a second sidewall of the cavity and a bottom surface of the cavity; and
- a light-emitting diode chip set up inside the cavity of the insulating sub-mount, wherein the light-emitting diode has a first electrode and a second electrode electrically connected to the first patterned conductive-reflective film and the second patterned conductive-reflective film.

Claim 2. (withdrawn) The light-emitting diode package structure of claim 1, wherein the package further comprises a pair of bumps set up between the first electrode of the light-emitting diode and the first patterned conductive-reflective film as well as the second electrode of the light-emitting diode and the second patterned conductive-reflective film.

Claim 3. (withdrawn) The light-emitting diode package structure of claim 2, wherein material constituting the bumps comprises lead-tin or Au-Sn alloy or Au.

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Claim 4. (withdrawn) The light-emitting diode package structure of claim 1, wherein material constituting the insulating sub-mount is selected from a group consisting of aluminum nitride, silicon, GaAs, SiC, boron nitride, beryllium oxide and zinc oxide.

Claim 5. (withdrawn) The light-emitting diode package structure of claim 1, wherein the package further comprises a first bonding pad and a second bonding pad set up on the first patterned conductive-reflective film and the second patterned conductive-reflective film for connecting electrically with an external circuit board.

Claim 6. (withdrawn) The light-emitting diode package structure of claim 1, wherein the sidewall and the bottom surface of the cavity form an obtuse angle.

Claim 7. (original) A light-emitting diode package structure, comprising:
a semiconductor sub-mount having a first surface with a cavity therein;
a first patterned conductive-reflective film set up on a portion of the first surface, a first sidewall of the cavity and a bottom surface of the cavity;
a second patterned conductive-reflective film set up on a portion of the first surface, a second sidewall of the cavity and a bottom surface of the cavity; and
a light-emitting diode chip set up inside the cavity of the semiconductor sub-mount, wherein the light-emitting diode has a first electrode and a second electrode electrically

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connected to the first patterned conductive-reflective film and the second patterned conductive-reflective film.

Claim 8. (original) The light-emitting diode package structure of claim 7, wherein the package further comprises a pair of bumps set up between the first electrode of the light-emitting diode and the first patterned conductive-reflective film as well as the second electrode of the light-emitting diode and the second patterned conductive-reflective film.

Claim 9. (original) The light-emitting diode package structure of claim 8, wherein material constituting the bumps comprises lead-tin, gold-tin alloy or gold.

Claim 10. (original) The light-emitting diode package structure of claim 7, wherein the package further comprises a first bonding pad and a second bonding pad set up on the first patterned conductive-reflective film and the second patterned conductive-reflective film for connecting electrically with an external circuit board.

Claim 11. (original) The light-emitting diode package structure of claim 7, wherein the sidewall and the bottom surface of the cavity form an obtuse angle.

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Claim 12. (original) The light-emitting diode package structure of claim 7, wherein material constituting the semiconductor sub-mount comprises silicon or gallium arsenide or SiC, zinc oxide.

Claim 13. (original) The light-emitting diode package structure of claim 7, wherein the semiconductor sub-mount further comprises:

a first conductive type semiconductor sub-mount, wherein the first conductive type semiconductor sub-mount has a second conductive type region therein; and

an insulating layer set up on the first conductive type semiconductor sub-mount, wherein one of the electrodes is electrically connected to the second conductive type region but electrically isolated from the first conductive type semiconductor sub-mount through the insulating layer.

Claim 14. (original) The light-emitting diode package structure of claim 12, wherein the first conductive type semiconductor sub-mount is an N-doped material layer and the second conductive type region is a P-doped material layer.

Claim 15. (original) The light-emitting diode package structure of claim 12, wherein the first conductive type semiconductor sub-mount is a P-doped material layer and the second conductive type region is an N-doped material layer.